

## ***STANDARD VII***

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### ***LIBRARY AND INFORMATION RESOURCES***

The three areas covered in this Standard (Libraries, University Computing, and Media Services) have experienced tremendous growth since 1993. All three involve substantial use of technology resources, and consequently, there is a significant amount of overlap. Although the three departments are discussed separately, they are clearly interdependent. Moreover, there is considerable potential for even better integration and a greater degree of collaboration among the three.

#### **A. Library**

Response to Fifth-Year Review: The NEASC Commission on Institutions of Higher Education requested in 1990 that in its next comprehensive self-study the University include information on the steps it has taken to “provide sufficient library resources to support graduate programs and increased faculty research activity and to hire adequate numbers of library staff as the libraries continue to expand.”

**Library Staffing:** Nine FTE were added from 1998 through December 2002 using Connecticut State Office of Policy and Management funding related to the doubling of the Haas Library Space. Positions added include three professional librarians (one as Associate Director), four staff members, and two custodians. Library personnel now include the Director, the Associate Director, 10 full-time professional librarians, and 11 technical support personnel (23 full-time staff), plus six part-time librarians, part-time clerks, University Assistants, and custodians. The University has made a strong commitment to ensure that the library is well staffed.

**Library Resources:** Library resources to support graduate programs and increased faculty research have been allocated above and beyond regular funding in targeted areas. For example, the Staff Report of the Connecticut Board of Governors Advisory Committee on Accreditation, which conducted a campus visit in Fall 2002 preparatory to recommending state accreditation for the M.F.A. in Visual Arts, took note that in accord with the acquisition plan for the program, 327 new art books and 14 periodical subscriptions have been purchased specifically for the M.F.A., the Grove Dictionary of Art database has been made available, and the library is in the process of making additional purchases as agreed in the program proposal.

The proposal for the Ed.D. program includes an additional annual commitment to the library for three years and an increase in regular funding thereafter.

Resources specifically designated for other graduate programs include The American History and Life database (History M.A.), the EBSCO Health Source Nursing database (M.S.N.), and Interdisciplinary Gerontology Studies (post-baccalaureate certificate in Gerontology).

Resources to support faculty research include the WestLaw database (Justice and Law Administration), the Scientific and Technical Information Network (Chemistry), JSTOR Arts and Sciences databases (general faculty), and Yale Library privileges (general faculty).

Recognizing that increased costs of all materials have eroded buying power, steps need to be taken to further enhance library resources.

### **Description**

The mission of the Western Connecticut State University Library is to consistently and fully support the mission, purposes, and curriculum of the university; to promote the development and growth of quality information services; to provide effective methods of accessing, acquiring, and evaluating information, and instruction in their use; and, through effective use of resources, to strengthen the scholarship, intellectual inquiry, and cultural development of its students, faculty, and staff.

In the years since the last NEASC self-study in 1993, the State of Connecticut and the University have committed considerable resources and energy toward fulfilling this mission, most notably with the 1999 renovation and expansion of the Ruth A. Haas Library on the Midtown campus. The reconstruction added 50,000 square feet to accommodate collection growth and provide ample study space. The resulting 100,000 square-foot building provides an attractive, inviting, spacious teaching and learning environment. The improvements, detailed in the university's *Fifth Year Report* to the CIHE, met with NEASC/CIHE approval.

The Robert S. Young Library, a branch facility located on the Westside campus, is organized much like a corporate library. The business collection supports curriculum in the areas of accounting, finance, management, marketing, management information systems and, to some extent, the Division of Justice and Law Administration. The library operates with funds from the State and a generous endowment from the Young family.

Librarians at WestConn and at Naugatuck Valley Community College (NVCC) have worked together to provide services for students who attend WestConn at Waterbury. Reserve readings, for example, are available in the NVCC library, although ERes (the electronic reserve system) is becoming increasingly popular. The WestConn Libraries' website has a page ("WestConn@Waterbury") that provides information and links to access library resources.

The Haas Library, located at the center of the Midtown campus, is fully accessible. The collection and services are available during the 82 hours the library is open each week, and nearly all materials, with the exception of certain archival and special collections and reserves, are housed on open stacks. Library privileges are available to students, faculty, staff, emeriti faculty, WestConn alumni association members, Naugatuck Valley Community Technical College students, the Council of Connecticut Academic Libraries directors (and member schools' faculty and staff), and students at Charter Oak State College. Staff assistance and the usual bibliographic access tools (online public catalog, periodical holdings lists, indexes) facilitate the use of the collection. The Young Library, open 65 hours weekly, provides most of the same services as the Haas Library, and is also fully accessible. The catalog and other electronic resources are available twenty-four hours a day, seven days a week, through the library's web site. The library has become increasingly central to the instructional and scholarly life of the University, and is also positioning itself as a technology innovator on campus, providing state-of-the-art services in support of the growing number of distance learning students, for example.

In addition to supporting the educational and curricular goals of the University, the newly renovated Haas Library provides an excellent venue for offering cultural enrichment opportunities to the public, as well as to the campus community. Since opening in Fall 2000, the library has hosted a number of events (including a very popular quilt exhibit, poetry readings, art exhibits, and musical offerings).

A highly qualified full-time staff administers the libraries, including the director, the associate director (a position created in 2001), and 10 full-time professional librarians. Librarians are faculty members at WestConn with all faculty rights and responsibilities. Librarians serve on University Senate committees and are required to meet criteria equivalent to those required of teaching faculty for promotion and tenure. Also on staff are 11 technical support personnel and 6 part-time adjunct librarians, who help to cover evenings and weekends. In addition, there are a number of University Assistants and part-time clerks. During FY 2001-02, there were 23 staff members (excluding students). Because virtually all librarians and other staff have responsibilities that involve administration, technical, and public service, staff time cannot be divided into numbers of hours in any one specific area.

The Media Services and Library Policy Committee, a standing committee of the University Senate, supports the staff in improving library services, and helps to provide the users' perspective. Additionally, student and faculty suggestions are solicited through comments received on instruction evaluations and through informal discussions with the staff. In Spring 2002, 86 students participated in a pilot project interview-type library utilization and satisfaction survey that provided many suggestions for enhancing services.

Librarians work closely with classroom faculty to design and deliver library user instruction to various classes, including general orientation for students in English composition courses. These library-user classes, offered in the Haas Library's new 27-laptop education lab, are carefully designed to meet instructional and information literacy objectives and involve a wide variety of delivery methods and materials.

The library's departmental liaison program continues to evolve. The staff has identified this initiative as an opportunity to increase the library's visibility and effectiveness in information literacy programs, collection development, and communication.

**Physical description.** The new Ruth A. Haas Library opened in September 2000. The building encompasses 100,000 square feet on six levels and 414 seats. In 1993, the library contained 49,718 square feet on five floors and a mezzanine.

A new CyberCafé where students can gather informally and enjoy snacks and beverages has been extremely popular; the CyberCafé also serves as the venue for the cultural enrichment presentations mentioned above. New individual study rooms on the third and fourth floors, two group study rooms, and several comfortable seating areas were incorporated into the design of the expanded library.

The Robert S. Young Library, completed in 1981, was recently refurbished. Major projects included re-carpeting and repainting and, most importantly, renovations that brought the library into full compliance with ADA standards. Ramp accessibility was added to the study/instruction room, the spaces between the stacks were widened, and an ADA-compliant security gateway was added. Library chairs were reupholstered and a new circulation/reference desk has been installed. The Young Library contains 3,447 square feet on one floor, and includes 56 seats.

**Collections.** Individual departments and faculty members select over half of the titles purchased by the library. The selections are approved for expenditure from department allocations by chairpersons or their designees; occasionally, approval by the appropriate School dean is required. The remainder of the book budget is used to provide materials for interdisciplinary use, reference materials, and continuations, for example. Students may also recommend items for purchase.

Major review and weeding of the general collection were undertaken before the move to the “swing space” (the temporary building occupied during the library renovation, now called Warner Hall). Faculty members have been asked to review again the holdings in their areas of expertise and to recommend the purchase of new materials.

WestConn and its sister institutions in the State University System share their catalogs through CONSULS, a centralized, system-wide bibliographic database.

Two major gifts were donated to the library in 2001. The Geddes collection, a gift of the widow of the former dean of men at WestConn, consists of approximately 6,000 volumes on military history. The Whitney Video Collection consists of 1,446 videos, dating from 1922 to 1999 and includes films featuring many classic Hollywood stars such as Rudolph Valentino, Clara Bow, Mary Pickford, Myrna Loy. This collection will be a major asset in support of a new course in the History of American Film. In 1997, the Direct Marketing Educational Foundation, Inc., designated the University as a site for its collection of teaching materials to be used in support of the direct marketing certificate program offered by the Ansell School of Business; books (6-10) are added to the collection annually.

The addition of a full-time Archivist and Special Collections Librarian in 2001 filled a critical need. The Archives almost immediately became the main repository for campus information of historical value; the archivist has solicited and received several important gifts from former faculty members and has been instrumental in research and in preparing materials for the University’s centennial celebration. Special Collections is dedicated to preserving the history of Danbury and Fairfield County, Connecticut, as a reflection of the history of the town that helped shape the University.

Included in the Haas and Young libraries’ holdings are 206,036 volumes (186,926 titles), approximately 1,612 periodical titles (including currently received, gifts, microforms, back runs, etc., but not electronic periodicals), approximately 40 databases, 7,998 audio-visual titles, and 62,793 items in the government documents section (not including microforms). Many of the databases (e.g., EBSCO’s Academic Search Elite, JStor, etc.), provide full-text access to hundreds of periodicals.

Annual Reports, containing detailed information on both libraries, are available in the Team Workroom.

### **Appraisal**

The completed Haas Library reconstruction project has had a major impact on library services and library usage in the University and the region. The importance of providing an appealing, welcoming environment conducive to the learning process cannot be overstated. Since the renovations were completed, the number of visitors to the library has increased dramatically and the collections and services are much more visible to the University community and to the region.

Student and faculty satisfaction with library services and collections seems to be relatively high. In a Spring 2002 pilot survey conducted by library administration, a majority of the respondents (all undergraduates) indicated overall satisfaction with the library. Most full-time faculty responding to the Fall 2002 Faculty/Staff Survey agreed with the statement: “Communication between the library and your department is effective.” Responses to the Current Student Survey and NSSE also indicate general satisfaction with library services.

Library statistical data reveal that the number of books (i.e., traditional library materials) circulated has decreased over the last five years. This is a national trend, reflecting society’s reliance on online

resources. The library is adapting to this new environment, as evidenced in the percentage of the materials budget now devoted to e-resources.

Demand for e-resources and computing equipment has grown significantly since the opening of the new Haas Library; the 20 public computers are in constant use, and additional workstations are needed. To alleviate congestion, the library purchased and configured several laptop computers that may be checked out for use in the building.

In addition to the physical renovation project, the library has enjoyed a major upgrade in its virtual environment. Beginning in 1995, the library mounted a web page on the University network that provides a remote audience with databases, information and instructional materials. The web page has developed and matured over time and is currently the point of access to all library information and holdings. The library has discontinued nearly all CD-ROM subscriptions in favor of web access to databases. Through the CSU consortium and a shared proxy server, the library provides remote access for registered WCSU students, current faculty, and staff.

The library has purchased and installed ERes, an electronic reserves program, to provide 24/7 access to materials teaching faculty have chosen to make available. ERes, inaugurated in January 2002, has been steadily growing in popularity and now accounts for nearly 5% of all library reserves.

Interlibrary loan (ILL) remains extremely active. WestConn has established its position as a net lender with the OCLC service by consistently lending more materials than it borrows. In August 2002, a new ILL management software system (ILLiad) was installed that allows interlibrary loan users to submit, manage, and receive requested material electronically via the web.

Keeping pace with the need to provide resources to support new programs (particularly in the graduate area) is a challenge, and the difficulty of serving two growing campuses remains an issue. The Young Library on the Westside campus was originally designed and endowed to serve the Ancell School of Business programs only. However, the course and degree offerings on the Westside now also include Justice and Law Administration (JLA), Education/Educational Psychology, and Computer Science. Faculty and students in these departments must come to the Midtown campus to consult books and other printed materials in the Haas Library. Online periodical and reference databases have alleviated some of the problems, but hard copy materials still pose a challenge.

Library funding has been, and continues to be, a major challenge. When inflation and the rising costs of serial subscriptions are taken into consideration, overall funding has decreased in real terms in the last ten years, keeping WestConn below the ACRL recommended standard percentage of the University's educational and general budget (5%). Lack of funds has made it necessary to cut periodicals and other ongoing cost commitments, thus limiting the library's ability to pursue new strategic initiatives. Some additional state funding was allocated for costs associated with the expanded building, but most of these monies necessarily went to adding faculty and staff positions.

The library constantly strives to spend funds as prudently as possible. To that end, the library has begun to collect electronically and analyze statistical information regarding database usage, book circulation, reserves usage, interlibrary loan requests, cataloging processes, and other relevant data.

### **Projection**

The mechanisms already in place to strengthen partnerships with the classroom faculty (for example, the liaison program and information literacy services) provide opportunities to discuss and brainstorm curricular connections to information literacy and the acquisition of search skills. These partnerships

will also help the library to improve the quality of the print and non-print collection, and will facilitate the continuing improvement of collection development.

The Haas Library anticipates that WestConn's funding of an Ed.D. program in Instructional Leadership will enable it to provide satisfactory support of doctoral level teaching, learning, and research. As with all the academic disciplines it supports, the Haas Library will also continue to utilize longstanding cooperative agreements with CSU System libraries and other libraries, as well as document delivery services, to provide access to more specialized information resources needed for research.

To supplement the current print collection and to provide additional information resources to the remote user population, the library is considering the addition of an e-book service (e.g. netLibrary). Such a service would provide immediate access to thousands of full-text titles with recent publication dates. The service will be carefully researched before being selected, however, to ensure that the collection is in alignment with University curricular and educational goals.

Interlibrary loan services will be revolutionized with the installation of ILLiad, an integrated ILL management package. The program will not only streamline the back-office functions of the interlibrary loan process, but also give patrons more flexibility and control over their requested items. The most radical change resulting from implementation of ILLiad is the fact that over 80% of all requested articles will be delivered to the user's desktop in electronic form; items may be picked up anywhere, any time.

Further enhancements to the electronic reserves (ERes) project are also moving ahead as the library begins to experiment with streaming audio and video. Such complements to text-based electronic reserves will be invaluable in supporting distance education initiatives.

The library's technology environment is maturing and librarians are in discussion with University Computing regarding greater independence and access to network resources. With the addition of a full-time Systems Librarian (January 2001) and a full-time Systems Assistant (August 2001), the library is now prepared to take on more responsibility for servers and applications. Expanded access and privileges will allow the library to move forward with important technology initiatives at its own pace, reducing the burden on University Computing.

The library web pages have been redesigned to match the new University web environment and the pages moved to a Windows2000 web server. This migration should provide even greater stability and robust access for on-site users and the growing population of remote users. The library also expects the number of ERes users to continue to grow over the next two to three years. Technological enhancements have been made to the Interlibrary Loan module that allow patrons to manage their own ILL requests and to receive articles electronically.

In addition, the library anticipates delivering more content on the web (via open source software), both for on-site users and for distance learners. Currently, the library is experimenting with remote, and live reference services via Internet chat. Librarians are getting a good sense of the need for and interest in expanded reference services, again without taxing the resources of University Computing.

The library will use the analysis of newly gathered statistical information to inform future decisions about subscriptions and purchases. The data will also be used to ensure that funds are distributed as equitably as possible.

In accordance with standards outlined by the Association for College and Research Libraries, WestConn is beginning to develop an information literacy program. The first pieces of the program are now in place in the form of traditional library instruction and an online information literacy tutorial entitled BILT: Basic Information Literacy Tutorial. BILT, an adaptation of the award-winning TILT (Texas Information Literacy Tutorial), was developed cooperatively with librarians from the other CSU institutions. Plans to expand information literacy offerings include subject-specific web-based tutorials and instructional outreach to distance education students as well as to on-campus students.

The library submitted a proposal to University Computing requesting 20 additional PCs for the Haas Library to meet the current demand for workstations and provide greater flexibility for students studying and doing research. The date set for installation of the first group of additional PCs was January 2003. In addition, library staff and University Computing are looking into the feasibility of a wireless network (with additional laptop computers) for the CyberCafé and throughout the upper levels of the library.

In order to diversify sources of funding, the marketing of services and events has become more commonplace in the library world. The library director will be spending energy and time promoting these services (both traditional and emerging) and the cultural events the library sponsors. To meet the challenges presented by fiscal constraints, the library will also be working with Institutional Advancement and the Office of Grant Programs to expand fundraising activities in support of new initiatives and to ensure that the library will continue to offer the highest quality of service possible.

## **B. University Computing**

### **Description**

University Computing's mission is to provide an information technology environment that delivers a seamless learning atmosphere for students and faculty while also meeting administrative needs. The University will be a leader in using technology to enhance teaching and learning to meet the educational needs of a diversified student body, faculty and administration. University Computing supports the University mission of empowering students, assuring effective teaching, strengthening partnerships with people and institutions while supporting continuous improvement and intellectual integrity.

#### Institutional Resources:

The budget for University Computing has increased significantly in order to keep pace with administrative and academic computing needs. As is typical nationally, the largest single expense is personnel (47%), followed by hardware (26%). Software represents 5% of the budget, services 3%, and the remaining 18% is used to cover a number of different expenses (furniture, supplies, whiteboards, e.g.).

WestConn's network, based on an advanced CISCO fiber optic network and leased line ATM links, provides data, voice, and video services to both campuses and within the CSU system. Our TCP/IP network currently supports over 2,300 computers (PCs, Macs, and Sun workstations), all with a connection to the Internet and 100 MB to the desktop. The network also supports over 925 residence hall network connections. Our environment consists of 36 Windows NT/2K and Mac servers providing access to network-based software, file services designed to encourage interdisciplinary collaboration, Lotus Notes web-based services, and network delivery of CDs.

The Information Technology Committee (ITC), a standing committee of the University Senate (and therefore under governance), reviews and assesses student and faculty computing needs on an ongoing basis. Established in 1999, ITC membership includes: (1) the elected chairs of the technology committees from each of the three schools; (2) the director of library services (or designee); (3) the director of media services; (4) the director of information technology; (5) computer science and management information systems faculty members; (6) two student representatives (one of whom is the SGA president); and (7) the Chief Information Officer. Committee members are responsible for representing the needs of their respective constituencies and may also bring concerns and proposals to the committee. Advocacy for administrative computing needs is the responsibility of the Chief Information Officer and the director of Information Technology (IT).

#### Instructional Technology: Labs and Classrooms

The ITC developed the University's three-year plan to upgrade, modernize, and expand the technology in classrooms and labs. The plan calls for six to nine classrooms each year to be fitted with basic technology including an instructor workstation, projection equipment, laptop connections, and a document camera and/or a VCR. Faculty members' computers (laptops and/or desktops) are refreshed at least once every three years. The computer science department replaces their hardware every two years, and some faculty get replacements every year. The decisions about who gets what equipment and when is made by the School technology committees, whose chairs serve on the ITC.

University Computing covers the cost of all standard software updates for classrooms and labs. In addition, the ITC makes funding available to faculty for software for classrooms and laboratories required for specific disciplines or courses, and additional funding is available for software to support faculty research. In both cases, faculty apply through their departments and the request is forwarded to the Information Technology Committee. To date, all requests have been approved.

#### Faculty Training

University Computing currently has a budget of \$15,000 annually for faculty training. Training is arranged through each School's Technology Committee, and faculty members are paid to conduct workshops for their colleagues. The money also supports training off campus for faculty who request special classes.

#### Student Training

Developed in 1997, the WestConn Student Technology Training Center (STTC), supported by the student technology fee, has 13 IBM P4s equipped with DVD/CDRW drives, zip drives, flat panel monitors and 2 G4 Power Macs with Zip drives, DVD /CDROM drives, and flat panel displays in Room 225 of the Student Center. The STTC's mission is to provide students with out-of-classroom, hands-on experience. Through one hour, student-taught workshops and tutorials, students can enhance their comfort level with a number of software packages (Quark, PowerPoint, and Excel, for example). The Center is open to faculty and staff on a space-available basis.

#### Computer Labs

The two general computer centers (one on the Westside and the other on the Midtown campus) are each equipped with approximately 40 IBM desktop computers. The Midtown center also includes Macintosh computers. These facilities support a diverse selection of software packages. The computer



centers are equipped with one or more group workstations for multiple users, a graphics station with specialized software, and network printing capabilities.

At the close of the Fall 2001 term, the STTC had logged 3,776 student users, the Midtown lab (MTCC) had 21,373 student users, and the Westside lab (WSSC) numbers were 11,947.

There are two 24-hour labs at WestConn: one located on the Midtown campus in Student Center Room 214, and the other at Westside Room 247c. These facilities are not staffed and are intended for the use of students who need 24-hour access to computer technology and equipment. Each facility is equipped with 4 IBM PCs, 4 Macs, Zip Drive Access, and at least one printer, as well as a variety of software including the Microsoft Office Suite and Internet Explorer.

In addition to the Computing Centers, STTC, and 24-hour labs, University Computing supports other technology facilities and departmental labs on campus. Fifty-four classrooms (more than 70% of WestConn's classrooms) are equipped with basic technology (projection equipment, instructor workstation, VCRs; some have document cameras). Thirteen are multi-station computer classrooms, with a desktop or laptop for every student (ten are PC, three are Mac). Responsibility for each technology classroom is assigned to a specific academic department, giving the department "ownership" of the facilities for security and maintenance purposes.

Nearly all of WestConn's full-time faculty have computers in their offices, compared with 50% in 1993 at the time of our last self-study. Some faculty members have both desktops and laptops.

In 1997, as a follow-up to a comprehensive information technology study completed two years earlier (see above), the decision was made to merge academic and administrative computing functions and staffs into a single entity – University Computing. The CIO now has primary responsibility for decisions regarding information technology planning, implementation, and support throughout the University. Also in response to the findings of the 1995 study, technology committees were established in each of the University's three Schools to ensure that faculty curricular and scholarly needs are addressed.

University Web Site: WestConn launched its first web site in January of 1995. Since then, the site has grown from a modest collection of school information and hyperlinks to a much more robust offering of information and services. The web site has gone through many changes and versions, and with each iteration it has become a much richer resource for users.

ResNet connections in every room in the residence halls provide students with Ethernet access to WestConn's network and to the Internet. Over 70% of residence hall students have opted to connect to WestConn's network. Dial Up Networking (DUN) allows faculty, staff, and students the ability to connect from off-site to WestConn's network using a modem. Instructors can use the class shared drives to make resources available to their students, and file shares are now available to students as well.

Lotus Notes e-mail via a web-based interface makes e-mail available to all faculty, staff, and students. At present, 435 faculty and staff are using Lotus Notes e-mail. Lotus Notes R5 Domino was made available as a pilot to students in the Spring 2002 semester. Seventy-eight students were using Lotus Notes as of Spring 2002; 674 students in Fall 2002. The majority of students, however, have been using their own accounts.

In 1996, the CSU System Office decided to convert core administrative and academic systems from stand-alone, mainframe-based applications to an integrated client/server-based Enterprise Resource

Planning (ERP) system. SCT's Banner Suite of Finance, Human Resources, Student, Faculty, Admissions, Financial Aid and Alumni modules was selected. The Alumni and Finance modules went live in 1999, and the remaining core modules (Human Resources, Student, Financial Aid, Faculty, and Admissions) were put into operation in 2001. Since Spring 2002, students have been able to register for classes, make payments, view schedules and courses, and access personal information through the World Wide Web. Faculty members can now view class lists, teaching schedules, and student transcripts.

As of Fall 2002, University Computing's staff consists of the CIO, 17 full-time administrative faculty, 3 full-time clerical employees, with four vacancies (two new positions), six part-time employees, and more than 30 student workers.

There is some support for information technology at the CSU system level, e.g. system-wide contracts for major hardware and software purchases, bond fund requests for technology equipment, and the implementation of major software systems. WestConn has collaborated with the System Office on telecommunications and programming projects and in planning technology for new facilities. Three of the four state universities (Central, Southern, and Western) and the System Office cooperated in the CISCO purchase, and the Oracle license is system-wide. The System negotiated a Microsoft licensing agreement that covers faculty and staff home computers, as well as on-campus use.

### **Appraisal**

Until recently, the highly competitive nature of the business environment within Fairfield County made it difficult for University Computing to hire and retain skilled employees because the University's contractual requirements precluded offering competitive salaries. With the downturn in the high tech areas that resulted in many layoffs, however, the University has been more successful in recruiting. The department's goal is to provide a high level of technological support to the University community. Replies to the Fall 2002 Faculty/Staff Survey indicated that a strong majority of full-time faculty respondents believe that WestConn provides adequate technological support for their department. By Summer 2002, five of the nine vacancies had been filled, and an aggressive recruitment effort is under way to fill the remaining positions. Short staffing has meant that staff development and training was not at the desired level; moreover, the staff often felt that there was insufficient time for planning and research.

Although the budget for technology has increased dramatically over the last ten years, the costs continue to rise. Personnel costs, here as elsewhere, are the biggest single expense in the technology budget. Enterprise Resource Planning software and training are also significant items in the technology budget at WestConn, as is the case at institutions of all sizes all over the country (see "Third Annual EDUCAUSE Survey Identifies Current IT Issues," in *Educause Quarterly*, Number 2, 2002, p.15; hereafter *EQ 2:2 {2002}*). To supplement budget allocations, an instructional technology fee was instituted in 1996. The fee for full-time students, \$60 per semester in 1996, has risen to \$100 per semester in Fall 2002; the fee is standard throughout the CSU system. These fees help defray the costs of bringing technology into the classroom.

Computer and network security, "the predominant challenge of the information age," (*EQ 2:2 {2002}*, 18) is a prime concern at WestConn. University Computing recently added a network security person to its staff. Among his duties are the development of a comprehensive security policy, a review of server vulnerabilities, and the setting up of Virtual Private Networks. WebCT (the course management system) and Campus Pipeline (a campus-wide information web portal) consultants have worked with University Computing on security issues specific to their products.

Educause's 2002 annual survey found that faculty development, support, and training have moved to the top-ten list of issues for IT leaders. (*EQ*, 2 {2002}, p. 8). This is certainly the case at WestConn, as well. A more consistent technology training plan for faculty and administrative staff would enable them to take full advantage of all available technologies and would result in a more knowledgeable, technologically proficient user base. Ongoing training received a significant boost during the summer of 2002 when library personnel offered a grant-supported three-day workshop for faculty on technological supports for student learning. So many faculty signed up for the workshop that University Computing provided funds for a second workshop the following week.

Chief among the prerequisites for successful faculty development programs in the use of available technologies are: (1) understanding faculty culture and its differences from IT culture; (2) recognizing that various academic disciplines turn to technology to meet different needs; and (3) gaining faculty interest and respect by recruiting advisers who are known to share discipline values. (*EQ*, 2 {2002}, p. 18). As new technologies are implemented throughout the campus, departments are taking more responsibility for computing, particularly through the School technology committees and membership in the University-wide technology group. University Computing has endeavored to serve the needs of the campus community, although understaffing has sometimes meant that individual faculty members and departments have had difficulty resolving technology issues in a timely fashion. Ensuring that technology is fully accessible to persons with disabilities is a challenge. There are resources that are not easily made use of by people who are visually impaired, for example.

One of University Computing's greatest assets has been the reliability and integrity of WestConn's network and server environment. This backbone of CISCO communications equipment and IBM and Compaq Servers ensures that information will be delivered to the desktop in a secure, timely, and dependable fashion.

The Information Technology Committee has been a tremendous asset in planning, implementation, and training. The ITC has done its work so successfully, in fact, that the University Senate has cited the group as a model for committees that require special expertise.

The recently redesigned website increasingly provides valuable resources to WestConn students, faculty, and staff, as well as prospective students, alumni, and the community in general. It is essential that the information be kept up to date and accurate. University Computing is working to include a broader range of departments and individuals in managing the growing amount of content on the web site. The main web site recently moved off the old VAX/VMS mainframe to a new Windows-based server platform, making it possible for University Computing to offer state-of-the-art features and services from the web server. Work is underway to move the remaining sites (mostly faculty, staff, and student web pages) from the VAX to the new web server platform. Because of understaffing in University Computing, it has not always been possible to deliver services.

Implementation of the Banner ERP system core modules has brought about the integration of the University's Administrative Systems (Finance, Accounts Receivable, and Human Resources) with Academic Systems (Registration, Financial Aid, Admissions, and Alumni). Sharing of data between modules provides faculty, staff, and students with more accurate, up-to-date information, delivered in a standardized format across all applications. Some departments have felt the need for more training in order to use the software effectively.

Through the system-wide Online CSU initiative, approximately 40-50 courses in a variety of disciplines have been offered. Although the courses are offered through the System, faculty usually contact University Computing at WestConn when there are technical problems. The System Office has paid WebCT to work with faculty to convert courses in the existing E-College format to WebCT.

Space for training is currently an issue on both the Midtown and Westside campuses because of the ongoing renovation and building projects. Finding adequate space for faculty and staff training, multimedia resource centers, and experimental projects with the CS and MIS departments is currently a challenge.

### **Projection**

Once staffing levels are adequate, University Computing expects that response to requests for services and support will improve, and there will be more time for staff development and training, as well as for planning and research. While the University Computing staff has always worked beyond conventional hours, the demand for services is such that provision will have to be made for more technical support in the evening, on weekends, and from remote locations.

In an effort to address the faculty and staff training issue, University Computing will be hiring an instructional technologist to work with faculty on the integration of technology into the classroom. In addition, licenses for online hardware and software training for faculty and staff have been purchased through a commercial vendor. The students who staff the Student Technology Training Centers will be taking a proactive role by going into the classroom to help faculty and students learn how to use software efficiently and effectively. The Centers will also be offering one-hour workshops and one-on-one tutoring sessions. The Western Technology Association, a student group, will be offering web services to departments and to faculty members, and will be paid by the departments for their services.

The availability of adequate space for doing training workshops will improve significantly once the new science building opens and the ownership of Roberts Avenue School reverts to the University.

A goal is to have all appropriate classrooms equipped with appropriate technology (instructor stations, projection, e.g.; note: some classrooms are not appropriate for projection) by the Fall 2004 semester. A new multistation PC classroom will be added on the Midtown Campus in 2003, and a similarly equipped room will be added on the Westside in 2004.

WestConn's web site will continue to grow and become a much more comprehensive resource for all university information, from academic and administrative documents to course content to current campus information. These enhancements will make it possible for University Computing to provide a more comprehensive and seamless online experience for the WestConn community. Implementation of the Campus Pipeline portal and the WebCT authoring environment will be critical to this effort.

Additional Banner Web modules for Student and Faculty Services will be added so that more information will be available and fewer transactions will require students to go from office to office, building to building. Other Banner Web modules such as Web for Employees, Web for Alumni, Web for Financial Aid, and Web for Admissions will be implemented to increase the level of service available to the University community. Other functions such as fixed assets, grants processing, and web features will be added. Administrative infrastructure, including the Banner administrative software system, will be built to handle a doctoral-level program.

Security management is an issue of strategic institutional importance that will demand more and more of the attention of the leadership of University Computing, as on other campuses nationwide. The challenge will be to stay ahead of the hacker community's ability to breach security. The network security specialist's responsibilities include developing a draft of a comprehensive security policy,

examining servers for vulnerability, and setting up virtual private networks. In 2002, PricewaterhouseCoopers did a Windows NT security audit that brought in specialized equipment and hackers to test the system. University Computing is reviewing the findings with the auditors and will make appropriate adjustments. Obviously, the key is to address security concerns while at the same time respecting and preserving the open and flexible nature of computing in an academic institution.

The System Office has made the decision to purchase and implement a portal (Campus Pipeline) that will streamline access to University and student resources. The Student Affairs division and graduate and undergraduate students will be very involved in the discussion with Campus Pipeline consultants and trainers about which options should be available and when. The University is also investigating wireless technology with the expectation that it will introduce wireless on a pilot basis in the most heavily used locations on campus (e.g., the Haas Library Cybercafé and the Student Center).

One of the great uncertainties is whether or not the University will continue to receive funding adequate to support the required staffing and services, replacement of existing technologies, and the purchase, implementation, and support for new technological initiatives. Additional funding from external sources will be required to support campus-wide initiatives and the future technology needs of faculty, students, and staff. University Computing will work with Institutional Advancement and the Grants Office to identify and secure additional monies and gifts in kind.

### **C. Media Services**

It is the goal of Media Services to provide the WestConn community with the optimum media and media technology in support of instruction and promotion of the University. Media Services assesses, implements, and supports media technologies, produces the highest quality media materials, and educates the University community on the use and application of media and media technology.

#### **Description**

There are currently three full-time staff members in Media Services: a director, an assistant director and an office assistant. In addition, there are two University Assistants (non-students) and ten student assistants. The director serves *ex officio* on both the Information Technology Committee and the Media Services and Library Policy Committees.

The department operates two Media Centers, one located on the Midtown campus and the other on the Westside campus. Two viewing rooms and a production studio are located in White Hall (Midtown). The Midtown Center is open 69 hours per week; the Westside Center is open 40 hours per week. Services are also available to faculty who teach in Waterbury.

Media Services offers a wide range of services, including video/audio production, WCSU-TV, equipment distribution, event support, teleconferencing and videoconferencing, presentational media, digital media development, technology classroom support, media equipment maintenance and repair, and a number of other support services.

The department, which owns high quality digital editing and camera equipment, regularly produces the University's recruitment video, television and radio commercials, and public access shows coordinated by the Office of Public Relations ("Western Weekly" and "Parent Power"). Staff also tape University events, such as commencement, Centennial Day, the Annual Board of Trustees video, and forums presented by the Center for Excellence in Learning and Teaching. WCSU-TV consists of three television channels offering student development programs, weather broadcasting by Meteorology students ("The Weather People"), and Media Arts course projects.

Faculty, staff, and students may borrow equipment from any of the Centers, which are supplied with LCD projectors (3), television/videocassette recorders (15), DVD players (4), CD/cassette players (2), overhead projectors (12), audio cassette recorders (8), camcorders (4), tripods (6), portable screens (8), a laptop computer (1), a portable sound system (1), microphones (10) microphone stands (16), 16mm projectors (2), slide projectors (18), a document camera (1), opaque projectors (3), and podiums (3).

The department is equipped with a satellite dish to downlink programs and live teleconferences that can be routed to the Center's Viewing Rooms or to Channel 78 on WCSU-TV. Media Services staff also assist faculty and staff with videoconferences (live, two-way audio/video through phone lines). The University owns three PictureTel systems (two are at the Midtown campus, the other on the Westside).

Other services include video and audiotape duplication (with strict adherence to copyright laws) and film and video rentals. The Media Center also coordinates the maintenance and repair for all approved media equipment at the University.

Media Services has taken over equipment distribution for the Communications and Theatre Arts Department. Services are available from 8 a.m. until 11 p.m., offering better access for instructional purposes.

### **Appraisal**

Media Services has taken advantage of a drop in pricing to upgrade its editing systems and camera equipment so that is fully digital. The department now has professional, industry-standard production equipment.

Staffing levels have not kept pace with the significant increase in demand for services such as multimedia presentations and video production. University Assistants, more permanent than student staff and more highly skilled, have been helpful in video production and event support. Students have assumed increasing responsibilities, although as short-term employees they may complete their service just as their skills are nearing a high level of expertise. Students enrolled for a BA in Media Arts (Communications and Theatre Arts department) can give valuable assistance in Media Arts while gaining experience in their chosen field.

Despite these challenges, the department has provided the University community with video production of professional quality, including materials for instruction, marketing, and public relations.

### **Projection**

The fact that staffing and budget levels are likely to remain the same or even decrease presents a continuing challenge to Media Services in their efforts to keep pace with the growing demand. These constraints also limit the department's ability to adapt to new technologies.

Media Services' production staff will be offering new technologies (e.g., DVD/CD, web based, streaming video, etc.), and will assist faculty with implementing digital-based media into their courses, both traditional and non-traditional.

In January 2003, Media Services will convert to logging requests electronically.